Claims

1. Pore burner, especially for cooking appliances, with a housing having at least one inlet for a gas/air mixture as fuel and/or at least one inlet for air and/or at least one inlet for gas and/or at least one outlet for air and/or gas and/or exhaust, characterized by the fact that the housing has sintered metal powder and/or especially pressed metal wire mesh in the form of at least one dimensionally stable porous molded element (7, 7') on whose surface and/or in whose pore spaces reaction zones are present for flame development to form a flat burner.

2. Pore burner according to Claim 1, characterized by at least two assembled molded elements lying one against the other at least in sections in form-fit fashion, which are connected to each other especially in areas, preferably to form at least one groove or bevel and enter into a stable connection.

3. Pore burner according to Claim 1 or 2, characterized by the fact that the molded element (7, 7') comprises at least one integrated mounting and/or fastening element, especially a flange and/or a thread (8).

4. Pore burner according to one of the preceding claims, characterized by the fact that the molded element (7, 7') represents essentially a hollow element, especially a hollow cylinder.

5. Pore burner according to one of the preceding claims, characterized by the fact that the molded element (7, 7') includes at least one mounting and/or fastening element, especially a groove, tongue, flange and/or a thread (8).

6. Pore burner according to one of the preceding claims, characterized by at least two molded elements lying one against the other in form-fit fashion at least in sections, which are connected to each other especially in areas, preferably to form at least one groove.

7. Pore burner according to Claim 6, characterized by the fact that the material densities of at least two adjacent molded elements essentially agree.

8. Pore burner according to Claim 6 or 7, characterized by the fact that the material density in the region of the connection site of two joined molded

elements corresponds essentially to the material density of at least one of these molded elements.

9. Pore burner according to one of the preceding claims, characterized by the fact that the surface (16) of the molded element (7') has at least one irregularity (12, 14), especially at least one indentation and/or elevation that deviates from the base surface of the molded element (7').

10. Pore burner according to one of the preceding claims, characterized by the fact that the wall thickness of a molded element (7') varies, especially has at least two different thicknesses.

11. Pore burner according to one of the preceding claims, characterized by the fact that said pore burner represents a flat flame burner.

12. Pore burner according to one of the preceding claims, characterized by the fact that the molded element (7, 7') has a compressed density in the range from about 2.5 to about 5 g/cm^3, especially from about 2.8 to about 4.5 g/cm^3 at least in areas, especially in the area of a metal wire mesh.

13. Pore burner according to one of the preceding claims, characterized by the fact that the wire diameter of the metal wire mesh lies in the range from about 0.1 to about 0.4 mm, especially from about 0.16 to about 0.28 mm.

14. Pore burner according to one of the preceding claims, characterized by the fact that the metal wire mesh includes 1 to 5, especially 1, 2 or 3 metal wires.

15. Pore burner according to one of the preceding claims, characterized by the fact that the metal wire mesh is wound axially or radially before pressing.

16. Pore burner according to one of the preceding claims, characterized by the fact that surface loads in the range from 20 to 300 W/cm^2, especially 30 to 260 W/cm^2 are accessible with said pore burner.

17. Pore burner according to one of the preceding claims, characterized by the fact that the metal powder and/or metal wire mesh includes at least one metal and/or metal alloy that forms an oxide layer, especially a metal alloy containing chromium and/or aluminum.

18. Pore burner according to one of the preceding claims, characterized by at least one distribution device (100) for deliberate alignment of part of the gas or air stream and/or gas/air mixture stream, which can be arranged and/or shaped at least in sections in the hollow element of the pore burner (3') so that part of the air and/or gas stream or the gas/air mixture stream can be distributed so that the inside wall of the hollow element experiences a nonhomogeneous pressure distribution, especially in the region of the distribution device.

19. Pore burner according to Claim 18, characterized by the fact that the distribution device (100) is a baffle plate.

20. Pore burner according to Claim 19, characterized by the fact that the distribution device (100) comprises essentially metallic and/or ceramic materials.

21. Pore burner according to one of the preceding claims, characterized by at least one burner tube for air and/or gas that can be connected to an inlet of the pore burner (3').

22. Pore burner according to one of Claims 18 to 21, characterized by the fact that the distribution device (100) is present in sections or fully in the hollow element and/or the burner tube.

23. Pore burner according to one of Claims 18 to 22, characterized by the fact that the distribution device can be fastened at least in sections to the burner tube and/or hollow element.

24. Pore burner according to one of Claims 18 to 23, characterized by the fact that the distribution device (100) has no direct connection to the hollow element.

25. Pore burner according to one of Claims 18 to 24, characterized by the fact that a deflection surface of the distribution device, especially baffle plate (100) is sloped relative to the center axis of the hollow element, especially the hollow cylinder.

26. Pore burner according to one of Claims 18 to 25, characterized by the fact that the maximum cross-sectional surface of the distribution device (100) in the direction of flow of the gas/air mixture is more than 50% of the cross-sectional surface of the hollow element in the region of the distribution device.

27. Pore burner system comprising a pore burner according to one of Claims 1 to 26, and at least one feed tube for air and/or gas, which can be connected to an inlet of the pore burner and/or at least one ignition device.

28. Pore burner system according to Claim 27, characterized by the fact that at least one inlet of a dimensionally stable molded element is connected to at least one feed tube and/or burner tube for air and/or gas via a mounting and/or fastening element, especially a flange and/or a thread.

29. Pore burner system according to Claim 27 or 28, characterized by the fact that at least one inlet of a dimensionally stable molded element is at least partially welded onto at least one feed tube and/or burner tube for air and/or gas.

30. Pore burner system according to one of Claims 27 to 29, characterized by the fact that the ignition device (22) is arranged in the region of the outside of the hollow element at the corresponding inside of which the distribution device (100) has the smallest spacing.

31. Use of pore burners according to one of Claims 1 to 26 or pore burner systems according to one of Claims 27 to 30 for heat and/or steam generation in cooking appliances (1), especially gas heated cooking appliances or in heating appliances.

32. Cooking appliance, especially a gas-heated cooking appliance, comprising at least one pore burner, especially a pore burner (4, 4', 4'') according to one of the Claims 1 to 26 or a pore burner system (3, 3') according to one of Claims 27 to 30.

33. Heating appliance comprising at least one pore burner, especially a pore burner (4, 4') according to one of the Claims 1 to 26 or a pore burner system according to one of the Claims 27 to 30.